

# Richard Shi

Software Developer

## Contact

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## Skills & Technologies

### Proficient

Java,  
C, C++, Swift  
Ruby, Javascript

### Knowledgeable

Python, Bash, Objective-C  
SQL(Postgres), Redis  
Elixir  
ARM Assembly

### Tools

Git, svn  
Trello, Gerrit, JIRA, Jenkins  
GNU/Linux, MacOS  
vim, Emacs  
Android Studio, XCode  
L<sup>A</sup>T<sub>E</sub>X

## Education

### University of Waterloo

Candidate for BAsC in  
Computer Engineering  
Sept 2015 – Apr 2020

## Certifications

Oracle Certified Associate,  
Java SE 7 Programmer  
Summer 2015

## Work Experience

### Rave Media

Jan–Apr 2017

*iOS Mobile Developer*

- Redesigned and optimized the entire networking/REST layer of the social video app in Swift, **reducing request latency by 14%**
- Rewrote memory management of the app, reducing usage by **73%** overall
- Redesigned build system to **cut build times by 84%** and enable Swift frameworks
- Mentored less experienced interns Swift, software architecture, Git, etc.
- Led the simplified Chinese localization of the iOS app
- Performed code reviews, feature designs, bug and crash triaging, and Git branch management

### Blackberry

May–Aug 2016

*Camera Firmware Developer*

- Optimized camera performance for prioritized camera apps, enabling **3X video resolution increase** at minimal performance loss
- Led the development of the Asia-model mandatory firmware shutter sound, enabling **sales in South Korea**
- Created camera component wiring diagrams for the Blackberry KeyOne phone
- Performed Gerrit code reviews, JIRA issue triaging, benchmarking, and won Foosball matches

## Selected Personal Projects

### ReactionBot.js

reactionbot-js.herokuapp.com

*Node.js, Heroku, Express, PostgreSQL, Slack API, BotKit API, Dashbot API, WebSockets*

- Created a chatbot for Slack that allows users to share images and memes with more than **30 engaged teams** since release
- Uses the Slack API with WebSockets on Express.js and PostgreSQL
- Initial version made with Ruby and Redis git.io/v9rJX

### Path Polo - Hack the North 2016 Project

git.io/v9wIz

*Android API, Java, Pebble API, Google Maps API*

- Built an Android and Pebble watch app to guide the visually impaired using haptic feedback
- Directed users to locations chosen on Google Maps on phone or pebble app

### Barcode Scanner

git.io/vdrv8

*Swift, iOS API*

- Created an iOS app to scan QR codes and barcodes of a variety of types in Swift

## Interests

**Geopolitics & World History:** President of high school Model United Nations Club; Actively organized lectures and mock debates for 30+ students for a Model United Nations Competition

**Swimming (Certified Swimming Instructor), Piano, Strategy Games**